# AppAssure™ 5.4.3

## Releaseinformationen

### Februar 2015

Diese Releaseinformationen enthalten Informationen zum AppAssure™-Release.


- Informationen zu Dell AppAssure 5.4.3
- Neue Funktionen
- Verbesserungen
- Behobene Probleme
- Bekannte Probleme
- Systemanforderungen
- Produktlizenzierung
- Einführung in AppAssure 5.4.3
- Globalisierung
- Informationen zu Dell
- Third-party contributions


# Informationen zu Dell AppAssure 5.4.3

Die Datenschutzsoftware von Dell AppAssure ermöglicht schnelle Sicherungen mit geprüfter Wiederherstellung für VMs und physische Server, die sich vor Ort oder an einem Remotestandort befinden können. Die Dell AppAssure-Software wurde für IT-Fachleute entwickelt, die eine leistungsfähige, erschwingliche und benutzerfreundliche Lösung für Sicherung, Replikation und Wiederherstellung benötigen, die Schutz für Server und geschäftskritische Anwendungen wie Microsoft Exchange, Microsoft SQL Server und Microsoft SharePoint bietet. Über eine einzige webbasierte Verwaltungskonsole können Sie alle wichtigen Daten und Anwendungen kontinuierlich sichern und schützen.

AppAssure 5.4.3 ist ein Nebenrelease mit Verbesserungen und erweiterten Funktionen. Siehe Neue Funktionen und Verbesserungen.

# Hinweise zu früheren Releases

Lesen Sie diesen Abschnitt vollständig durch, bevor Sie entscheiden, wann und wie dieses Release in der jeweiligen Umgebung installiert werden soll.

**Probleme mit Auswirkungen auf 5.4-Releases**

1 Von Dell wurde ein mögliches Problem in AppAssure, Version 5.4.2.189, festgestellt, das vorübergehend den Zugriff auf einige Wiederherstellungspunkte in Cores verhindern kann, für die bestimmte Last- oder Fehlerbedingungen zutreffen. In extremen Fällen kann dieses Problem zum Verlust einiger Wiederherstellungspunkte führen. Allen Kunden, die Release 5.4.2.189 verwenden, wird geraten, sofort ein Upgrade auf 5.4.3 oder zumindest auf 5.4.2.228 oder höher (5.4.2.230 oder höher für Linux) durchzuführen.

**Betroffene Produkte:** AppAssure, Version 5.4.2.189, ist die einzige betroffene Version. Das vorherige Release 5.4.1.77 ist nicht betroffen. Alle nachfolgenden 5.4-Releases ab 5.4.2.192 sind ebenfalls nicht betroffen.

**Details:** In 5.4.2.189 wurde zum Schutz von extremen Fehlern, z. B. Stromausfall oder Komplettausfall des Speichercontrollers, eine Änderung an der Rollup-Logik vorgenommen. Durch diese Änderung entstand versehentlich die Möglichkeit, dass Wiederherstellungspunkte verwaisen, wenn ein bestimmten Agent über einen Wiederherstellungspunkt verfügt, für den a) mindestens ein Volume fehlt oder b) eine Exchange-Bereitstellungsprüfung oder SQL-Anfügbarkeitsprüfung fehlgeschlagen ist. Cores, die bereits normal arbeiten, d. h. keine unvollständigen Wiederherstellungspunkte oder fehlgeschlagene Wiederherstellungspunktprüfungen aufweisen, sind nicht betroffen.

Es besteht die hohe Wahrscheinlichkeit, dass die verwaisten Wiederherstellungspunkte mit Unterstützung des Kunden-Supports repariert werden können. In einigen Fällen können die verwaisten Wiederherstellungspunkte nicht wiederhergestellt werden. Daher wird allen Kunden dringend geraten, so schnell wie möglich ein Upgrade auf 5.4.2.228 oder höher durchzuführen. Kunden, die nicht sofort in der Lage sind, ein Upgrade durchzuführen, sollten die Rollup-Funktion stattdessen deaktivieren, bis ein Upgrade durchgeführt werden kann.

2 Durch die Änderungen, die vorgenommen wurden, um die Leistung der Anwendung zu verbessern, werden Wiederherstellungspunkte in AppAssure 5.4.1 und höher anders dargestellt als in früheren Releases. Bei einem Upgrade von AppAssure 5.3.x auf AppAssure 5.4.1 oder höher, z. B. auf dieses 5.4.3-Release, werden vorhandene Wiederherstellungspunkte in die neue Darstellung konvertiert. **Aus diesem Grund ist ein Downgrade einer 5.4.x-Installation auf 5.3 nur möglich, wenn das Repository neu erstellt wird.**

Informationen zu den Änderungen seit Release 5.4.2 finden Sie unter Neue Funktionen und Verbesserungen.

> **HINWEIS:** Beim ersten Start des Core nach einem Upgrade von AppAssure 5.3.x auf AppAssure 5.4.x werden Wiederherstellungspunkte in die neue Darstellung konvertiert. Dieser Vorgang dauert ungefähr doppelt so lang wie das Laden der jeweiligen Wiederherstellungspunkte in früheren Versionen. Nach dieser anfänglichen Konvertierung werden Wiederherstellungspunkte jedoch wesentlich schneller geladen als in früheren Versionen.

Wenn Sie AppAssure 5.4.1 oder höher derzeit nicht installieren bzw. kein Upgrade auf diese Version Dialogfenster möchten, empfiehlt Dell Software, ein Upgrade auf AppAssure 5.3.7 durchzuführen, um von den neuesten Programmkorrekturen in der 5.3-Codebasis profitieren zu können. Weitere Informationen zu AppAssure 5.3.7 finden Sie in den AppAssure 5.3.7-Releaseinformationen.

# Neue Funktionen

Neue Funktionen in AppAssure 5.4.3:

- Fehlermeldungen enthalten Links zur Support Knowledge Base

Siehe auch:

- Verbesserungen
- Behobene Probleme

# Fehlermeldungen enthalten Links zur Support Knowledge Base

Wenn in der AppAssure Core Console ein Fehler festgestellt wird, z. B. beim Versuch, einen ungültigen Parameter einzugeben, wird ein Fehlerdialogfeld angezeigt. Diese Dialogfelder enthalten wie bisher Links für **Details anzeigen** und **Stapelüberwachung anzeigen** sowie die Schaltfläche **Schließen**.

AppAssure 5.4.3 enthält jetzt den neuen Link **Knowledge Base durchsuchen**. Wenn Sie auf diesen Link klicken, wird ein neues Browserfenster mit der Dell AppAssure Support Knowledge Base-Website geöffnet. Fehlerdetails werden automatisch als Parameter für eine Schlüsselwortsuche in der Knowledge Base übergeben. Falls Knowledge Base-Artikel existieren, die sich auf den gesuchten Fehler beziehen, werden diese auf der Seite angezeigt.

Weitere Informationen finden Sie im *Dell AppAssure Benutzerhandbuch*.

# Verbesserungen

AppAssure 5.4.3 ist ein Wartungsrelease, in dem hauptsächlich Probleme behoben wurden.

Nachstehend finden Sie eine Liste der in AppAssure 5.4.3 implementierten Verbesserungen.

- Änderungen bei den unterstützten Betriebssystemen
- Erweiterte Unterstützung für Linux-Distributionen
- Aktualisiertes Kaseya-Plug-in
- Aktualisierungen und Änderungen der Dokumentation

Siehe auch:

- Neue Funktionen
- Behobene Probleme

# Änderungen bei den unterstützten Betriebssystemen

Ab AppAssure Release 5.4.3 ist die Unterstützung der AppAssure Agent-Software unter Microsoft Windows XP SP3 auf die Professional-Edition beschränkt. Windows XP SP3 Home-Edition wird nicht mehr für geschützte Maschinen unterstützt, da der Support für dieses Betriebssystem von Microsoft eingestellt wurde.

# Erweiterte Unterstützung für Linux-Distributionen

Der AppAssure Core unterstützt jetzt geschützte Maschinen mit den folgenden zusätzlichen Linux-Distributionen:

- Ubuntu 14.04
- Red Hat Enterprise Linux (RHEL) 6.6 und 7 x 64
- CentOS Linux 6.6 und 7 x64

**HINWEIS:** RHEL- und CentOS-Distribution gibt es für Version 7-Releases nur in 64-Bit-Versionen.

Eine vollständige Liste der unterstützten Betriebssysteme für Core und geschützte Maschinen finden Sie unter Systemanforderungen.

# Aktualisiertes Kaseya-Plug-in

Das AppAssure Core-Release 5.4.3 bietet eine umfassendere Integration mit dem externen Tool Kaseya Virtual System Administrator (VSA). Kaseya VSA ist ein umfassendes Verwaltungsframework für IT-Systeme für den Einsatz in IT-Abteilungen und Anbietern von verwalteten Diensten (Managed Service Provider, MSP).

In Release 5.3.3 und früheren Versionen von AppAssure wurde die Integration mit Kaseya VSA, Version 6.2 bis 6.5, mit dem AppAssure Add-on for Kaseya unterstützt. Kaseya unterstützt derzeit Kaseya VSA, Version 6.3 und 6.5, sowie die Releases 7 und 8. Mit dem aktuellsten AppAssure Add-on ist AppAssure nun auch mit Kaseya VSA, Version 6.3 und 6.5 sowie Release 7, kompatibel.

Dieses Release des AppAssure Add-on zeichnet sich durch eine verbesserte Integration mit dem Dell AppAssure Lizenzportal aus. Dies umfasst beispielsweise die Möglichkeit, Installationsprogramme vom Portal herunterzuladen und Lizenzschlüssel zu überprüfen. Darüber hinaus wurde die Kommunikation zwischen dem Kaseya Add-on und den AppAssure Core- und Agent-Installationsprogrammen verbessert.

Unternehmen, die sowohl AppAssure 5.4.3 als auch Kaseya VSA für die Ressourcenverwaltung verwenden, können über eine zentrale Verwaltungsoberfläche die AppAssure Agent-Software bereitstellen, Maschinen schützen, auf denen die Agent-Software installiert ist, Replikationen durchführen, Wiederherstellungspunkte anzeigen und Repositoryspeicherorte hinzufügen oder ändern.

Für einige komplexe Funktionen, z. B. die Wiederherstellung von Daten aus einem AppAssure-Wiederherstellungspunkt, muss weiterhin die AppAssure Core Console verwendet werden.

Weitere Informationen zu dieser Integration sowie zum Installieren und Konfigurieren des AppAssure Add-ons finden Sie im *Dell AppAssure Drittanbieter-Integrationshandbuch*.

# Aktualisierungen und Änderungen der Dokumentation

In AppAssure Release 5.4.3 wurde die folgende Produktdokumentation aktualisiert.

- Das *AppAssure Bereitstellungshandbuch* wurde in *AppAssure Installations- und Aktualisierungshandbuch* umbenannt.
- Das *AppAssure 5 Migrationshandbuch* wird nicht mehr als separates Dokument gepflegt. Informationen zur Migration von 4 nach AppAssure finden Sie jetzt im Kapitel „Migration von Replay 4 nach AppAssure“ im *AppAssure Installations- und Aktualisierungshandbuch*.
- Der Abschnitt „Upgrade und Kompatibilität“ in den *AppAssure Releaseinformationen* enthält keine bewährten Verfahren und keine Kompatibilitätsmatrizen mehr. Ausführliche Informationen zur Aktualisierung von AppAssure, z. B. bewährte Verfahren, Kompatibilität von Versionen der AppAssure Core- und Agent-Software sowie Aktualisierungsschritte, finden Sie im Abschnitt „Aktualisieren von AppAssure“ im *AppAssure Installations- und Aktualisierungshandbuch*.
- Das *AppAssure Drittanbieter-Integrationshandbuch* wurde für Release 5.4.3 aktualisiert. Dieses Dokument enthält Informationen zur erweiterten Unterstützung des Kaseya Add-ons gemäß Stand von Release 5.4.2 und höher.
- Das *AppAssure Automatisierungshandbuch* ist neu für Release 5.4.3. Diese erste Ausgabe enthält Informationen zu den Anwendungsprogrammierschnittstellen von AppAssure (APIs).

# Behobene Probleme

Nachstehend finden Sie eine Liste der behobenen Probleme in diesem Release.

**Tabelle 1. Behobene Windows-Probleme**

| Behobenes Problem | Problem-ID |
|---|---|
| Bei AppAssure Cores, die auf Maschinen mit Windows 8 oder Windows Server 2012 installiert sind, kann der Fehler gemeldet werden, dass die Objektsynchronisierung von ReaderWriterLockSlim beschädigt ist. Die Core-GUI reagiert dann nicht mehr. Dies kann durch Installation eines Betriebssystemhotfix von Microsoft behoben werden. Weitere Informationen finden Sie im Microsoft Knowledge Base-Artikel 2965710, „Application freezes when it uses .NET Framework 4.0 in Windows 8 or Windows Server 2012“. Dort finden Sie den Betriebssystem-Rollupatch 2962407 (für Windows RT, Windows 8 und Windows Server 2012) von Juni 2014. | 19214 |
| Auf Core-Maschinen unter Windows 2012 R2 kann ein BSOD-Fehler auftreten, wenn Bereitstellungen durchgeführt werden und AppAssure-Prozesse stark ausgelastet sind. Dies kann durch Installation eines Hotfix von Microsoft behoben werden. Weitere Informationen finden Sie im Microsoft Knowledge Base-Artikel 2973052, „’0x00000018’ Stop error when volumes are mounted in Windows Server 2012 R2 or Windows Server 2012“. Dort finden Sie den Prerequisites-Patch 2919355 (für Windows 8.1 oder Windows Server 2012 R2) von April 2014. | 19305 |
| Local Mount Utility-Prozess wird weiter ausgeführt, obwohl der Prozess beendet wurde. | 19949 |
| Mangelnde Benutzerfreundlichkeit: Es ist unklar, wie Benutzer Vorlagen für den Schutzzeitplan speichern können. Schaltfläche „Speichern und übernehmen“ zum Zeitplanfenster hinzugefügt. | 21302 |
| SQL-Anmeldeinformationen für Agenten mit mehr als einer SQL-Instanz können nicht geändert werden. | 21357 |
| Problem betrifft Benutzer mit einem Pfad zur SQL-Datenbank, der mehr als 160 Zeichen umfasst. | 21545 |
| Einige Registerkarten in der AppAssure Core Console sind nach einer Aktualisierung des Core von 5.3.7 auf 5.4.1 nicht zugänglich, wenn ein Cluster geschützt oder repliziert wurde. | 21688 |
| SQL-Anmeldeinformationen für einen Benutzer mit sysadmin-Berechtigungen können nicht geändert werden. | 21734 |
| Schutzfunktion bleibt beim Erfassen von Metadaten aus der Startkonfigurationsdatenbank oder beim Ermitteln der Deduplizierungsunterstützung hängen. | 21765 |
| Bei einigen AppAssure Core-Benutzern vor Version 5.4.3 ist der folgende Fehler aufgetreten: „Out of memory error: System.OutOfMemoryException: Out of memory from 45 TB xfs volumes.“ | 22149 |
| Agent kann nicht zur Replikation hinzugefügt werden, wenn der Ziel-Core eine geschützte Maschine mit einem ähnlichen Namen enthält. | 23198 |
| Wenn der AppAssure Agent-Dienst länger als 1-2 Tage aktiv war, konnte es in bestimmten Unternehmenslizenzumgebungen dazu kommen, dass der Agent-Dienst abstürzt. | 23265 |
| Bei Benutzern, die das Local Mount Utility ohne AppAssure Core installiert haben, konnte LMU keine Wiederherstellungspunkte abrufen. | 23655 |
| Kunde kann SQL-Datenbanken mit FileStream nicht überprüfen. Andere Datenbanken können überprüft werden. | 23686 |
| Auf einem AppAssure Core mit 30 oder mehr geschützten Maschinen reagiert die grafische Benutzeroberfläche nicht, wenn die Einstellungen für nächtliche Jobs geändert werden sollen. | 23863 |
| Kunde kann nicht alle Volume-Ketten bereitstellen, wenn mindestens ein Volume verwaist ist. | 23929 |
| Repository konnte nicht bereitgestellt werden. Fehlermeldung: „System.ArgumentOutOfRangeException: Der Index lag außerhalb des Bereichs. Er muss nicht negativ und kleiner als die Auflistung sein.“ | 24035 |
| DVM-Fehler (Deduplication Volume Manager), der durch ein ungültiges Handle im DVM-Flush-Funktionsaufruf entsteht. | 24066 |
| Wenn beim Starten eines zuvor geplanten nächtlichen Jobs eine Übertragung aktiv war, blieb der nächtliche Job hängen. | 24095 |

### Tabelle 1. Behobene Windows-Probleme

| Behobenes Problem | Problem-ID |
|---|---|
| Auf der Registerkarte „Zusammenfassung“ für Agenten auf geschützten SQL Server 2005-Maschinen wurden keine Metadaten angezeigt. | 24100 |
| Das Zeitlimit für den HTTP-Listener beträgt für einen AppAssure Agent 1 Minute. Dieser Zeitraum war in einigen speziellen Fällen zu kurz, um einen Agenten zu schützen. | 24135 |
| Virtueller Export schlägt fehl mit dem Fehler, dass die virtuelle Maschine nicht umbenannt werden kann, während ein Export der Maschine durchgeführt wird, wenn der Export von einem Wiederherstellungspunkt einer geschützten Maschine erfolgen soll, für die Virtual Standby bereits konfiguriert wurde. | 24161 |
| Keine Möglichkeit, ein Archiv oder ein Seed-Laufwerk größer als 2 TB zu erstellen. | 24189 |
| Unterbrochener Löschprozess (z. B. durch Absturz des Core-Dienstes oder Kaltstart der Maschine) führt zu DVMBadRecord-Fehlern. | 24241 |
| Beim Erstellen eines Seed-Laufwerks, das für die Replikation verwendet werden soll, schlägt der Archivprüfjob für das Seed-Laufwerk mit dem folgenden Fehler fehl: 'i:\Seed\AABackup: Das Clientzertifikat wurde nicht gefunden. Das Serverzertifikat wurde nicht gefunden.' | 24247 |
| Wenn eine geschützte Maschine im AppAssure Core offline ist und Übertragungen geplant sind, weist die Ansicht auf der Registerkarte „Zusammenfassung“ der geschützten Maschine ein falsches Verhalten auf. | 25122 |
| Protokollmeldung ist falsch formatiert und die Protokolldatei enthält willkürliche Daten oder das System stürzt mit einer Zugriffsverletzungsausnahme ab. | 25261 |
| In bestimmten Umgebungen konnte es vorkommen, dass beim Löschen von Remote-Volumes (im Rahmen eines Rollups) der Prozess bisweilen während der Replikation bei der Synchronisierung hängen blieb. Dieses Problem trat nur in Umgebungen auf, in denen die Replikation vor Version 5.4.1 des AppAssure Core konfiguriert wurde, und nur dann, wenn keine Volume-Integritätsprüfung durchgeführt wurde. | 25098 |
| Falsche Schreibweise in der japanischen Sprachversion korrigiert. Die Beschriftung für den Absender im Fenster für die SMTP-Servereinstellungen wurde für Benutzer, die E-Mail-Benachrichtigungen einrichten, korrigiert. | 25834 |

### Tabelle 2. Behobene Linux-Probleme

| Behobenes Problem | Problem-ID |
|---|---|
| Betrifft Kunden, die Amazon oder XEN Server zum Erstellen von virtuellen Maschinen verwenden. Diese beiden Server verwenden standardmäßig eigene Einstellungen und Konfigurationen für virtuelle Datenträger. Aufgrund dieser Änderungen und Problemen mit der Datenträgergeometrie kann der AppAssure Core keine Metadaten empfangen und auf der AppAssure Core-Benutzeroberfläche keine Amazon- oder XEN Server-VMs einer geschützten Maschine anzeigen. | 23802 |
| Bei CentOS- und RHEL-Linux-Distributionen wird eine geschützte Maschine mit dem folgenden Fehler offline geschaltet: „Der Vorgang hat das Zeitlimit überschritten.“ Es besteht keine Möglichkeit, eine Verbindung zwischen Core und Agent herzustellen. | 23822 |
| Am Agent-Installationsprogramm für Linux wurden geringfügige Änderungen vorgenommen, um irrtümlich angezeigte Warnungen zu entfernen. | 25869 |

### Tabelle 3. Behobene DocRetriever-Probleme

| Behobenes Problem | Problem-ID |
|---|---|
| Wenn sich Protokolle und Datenbankdateien in verschiedenen Verzeichnissen befinden, konnte die Datenbank aus einem Wiederherstellungspunkt nicht geöffnet werden. | 23285 |

**Tabelle 3. Behobene DocRetriever-Probleme**

| Behobenes Problem | Problem-ID |
|---|---|
| In der DocRetriever Console werden keine Dateien und SharePoint-Objekte in Ordnern angezeigt. | 23681 |
| Das Installationsprogramm für DocRetriever schlägt für Maschinen fehl, auf denen SQL Server 2014 installiert ist. | 24414 |

# Bekannte Probleme

Nachstehend finden Sie eine Liste der Probleme (einschließlich Probleme, die auf Drittanbieter zurückzuführen sind), die derzeit in diesem Release vorhanden sind.

**Tabelle 4. Bekannte Windows-Probleme**

| Bekanntes Problem | Problem-ID |
|---|---|
| Repositoryprüfung schlägt mit dem Fehler „FSincomplete“ fehl, nachdem Volumes über die Registerkarte „Appliance“ erneut bereitgestellt wurden. | 17860 |
| Die Anmeldeinformationen eines Agenten sind in der XML-Ausgabe der API-Anforderung nicht verschlüsselt. | 20578 |
| Dieser Fehler betrifft Benutzer, die einen Export von virtuellen Maschinen nach ESXi durchgeführt haben. Die geschützten Maschinen können nicht gestartet werden, wenn der LSI_SAS-Treiberstartschlüssel auf 3 festgelegt ist. **Problemumgehung**: Ändern Sie den Wert für den LSI_SAS-Treiber in der exportierten Maschine in 0. Weitere Informationen finden Sie im Dell AppAssure Knowledge Base-Artikel 129512, „ESXi Virtual Standby Fails to Boot with STOP 7B after Upgrade to 5.4.2 or 5.4.3“. | 21329 |
| Beim Anpassen von Benachrichtigungseinstellungen für bestimmte geschützte Maschinen können die Einstellungen u. U. nicht übernommen werden. **Problemumgehung:** Unter Umständen ist es möglich, die Core-Einstellungen anzupassen, um das gleiche beabsichtigte Ziel für die einzelnen geschützten Maschinen zu erreichen. | 21704 |
| Integritätsprüfjob für fehlerfreie Datenbank schlägt fehl. Dieses Problem betrifft Benutzer mit bestimmten Umgebungen, in denen mindestens ein Exchange 2013-Server geschützt wird. **Problemumgehung**: Entsprechende Informationen finden Sie im Dell Knowledge Base-Artikel 127986, „Checksum check for Exchange 2013 fails with the error ‘Checksum check mismatches’“. | 21717 |
| Die Microsoft Central Management Console (MCMP) kann nicht geöffnet werden, wenn das Protokoll FIPS 140-2 aktiviert ist. **Problemumgehung:** Deaktivieren Sie das Protokoll FIPS 140-2 auf der jeweiligen Maschine oder installieren Sie MCMP auf einer anderen Maschine, auf der FIPS 140-2 nicht aktiviert ist. | 21830 |
| Dieser Fehler betrifft Kunden, die MCMP verwenden. Beim Neustart des Systems wird der MCMP-Dienst bisweilen nicht automatisch gestartet. Problemumgehung: Starten Sie den MCMP-Dienst manuell. | 21874 |
| Die Deduplizierungsrate wird nach einem Neustart des Core-Dienstes auf 0% zurückgesetzt. | 23195 |

**Tabelle 5. Bekannte Linux-Probleme**

| Bekanntes Problem | Problem-ID |
|---|---|
| Die Leistung von virtuellen Exporten ist bei LVM-Volumes (Logical Volume Manager) gering. | 16151 |
| Modul appassure_vss wird in einem Nicht-Installationskernel nicht automatisch geladen. | 16525 |
| Nach einem virtuellen Export von ESX oder Hyper-V nach SUSE Linux Enterprise Server (SLES) 64-Bit kann die exportierte VM nicht gestartet werden. | 19064 |

**Tabelle 5. Bekannte Linux-Probleme**

| Bekanntes Problem | Problem-ID |
|---|---|
| Im Linux-Kernelmodul müssen Bitmap-Speicherprobleme, z. B. inkonsistente Dateien im bereitgestellten Wiederherstellungspunkt, inkonsistente Rollback-Daten und mögliche Inkonsistenzen im Root-Volume korrigiert werden. | 19335 |
| Dieses Problem betrifft Kunden, die alte Kernel installiert haben. Bei der Installation der AppAssure Agent-Software kann das Installationsprogramm das Headerpaket nicht finden. **Problemumgehung:** Installieren Sie die Headerpakete manuell oder löschen Sie die alten Kernel und versuchen Sie, die AppAssure Agent-Software erneut zu installieren. | 20462 |
| Dieses Problem betrifft Kunden, die einen virtuellen Export einer Maschine mit einer Auslagerungsplatte durchführen. Die Platte ist in der exportierten VM zwar vorhanden, aber nicht ordnungsgemäß initialisiert. **Problemumgehung:** Die Auslagerungspartition kann nach dem virtuellen Export manuell mit einer UUID initialisiert werden. | 21648 |
| Dieses Problem betrifft Kunden mit SLES, die eine BMR-Wiederherstellung ohne automatische Partitionierung durchführen. **Problemumgehung:** Bearbeiten Sie die Datei "device.map" nach der BMR-Wiederherstellung so, dass "/dev/path" verwendet wird, anstatt UUIDs zu verwenden. | 21849 |

**Tabelle 6. Bekannte Mailbox Restore-Probleme**

| Bekanntes Problem | Problem-ID |
|---|---|
| Die Protokollierung während einer Wiederherstellung bewirkt, dass der Prozess fehlschlägt oder hängen bleibt. | 20109 |
| Dieser Fehler betrifft Benutzer, die eine Exchange-Datenbank (EDB) in Exchange 2013 mit Mailbox Restore öffnen. In solchen Fällen sind die Schaltfläche "Physische Integritätsprüfung" und das Menü "Datenbankwartung" nicht vorhanden, sodass die EDB nicht überprüft und nicht repariert werden kann. **Problemumgehung:** Starten Sie Mailbox Restore neu und öffnen Sie den Assistenten für die physische Integritätsprüfung, bevor Sie die EDB öffnen. | 21997 |

**Tabelle 7. Bekannte DocRetriever-Probleme**

| Bekanntes Problem | Problem-ID |
|---|---|
| Die Suche nach Containernamen funktioniert nicht. | 17887 |
| Die Versionsliste eines Dokuments wird nicht wiederhergestellt. | 21352 |

# Systemanforderungen

Sie müssen den AppAssure Core auf einem dedizierten Windows 64-Bit-Server installieren. Für jede Maschine, die Sie in einem AppAssure Core schützen möchten, müssen Sie die entsprechende Version der AppAssure Agent-Software für das Betriebssystem der jeweiligen Maschine installieren. Abhängig von Ihrer Lizenz und den umgebungsspezifischen Anforderungen müssen Sie mehrere Cores eventuell jeweils auf einem dedizierten Server installieren. Optional können Sie für die Remoteverwaltung mehrerer Cores die AppAssure Central Management Console auf einem 64-Bit-Windows-Computer installieren.

Vergewissern Sie sich vor der Installation von AppAssure 5.4.3, dass das System die folgenden Mindestanforderungen für Hardware und Software erfüllt. Weitere Informationen zur Auslegung von Hardware, Software, Arbeitsspeicher, Speicher sowie Netzwerkanforderungen finden Sie im Dell AppAssure Knowledge Base-Artikel 118407, „Sizing AppAssure Deployments“.

△ **VORSICHT: Die Ausführung des AppAssure Core unter Windows Core-Betriebssystemen, die nur eingeschränkte Serverrollen bieten, wird von Dell nicht unterstützt. Dies umfasst alle Editionen von Windows Server 2008 Core, Windows Server 2008 R2 Core, Windows Server 2012 Core und Windows Server 2012 R2 Core. Drei dieser Core-Edition-Betriebssysteme *werden* für die Ausführung der AppAssure Agent-Software unterstützt.**

**VORSICHT: Dell empfiehlt, den AppAssure Core nicht auf derselben physischen Maschine zu installieren, die als Hyper-V-Host dient. (Diese Empfehlung gilt nicht für Sicherungs- und Wiederherstellungsappliances von Dell.)**

# Anforderungen für AppAssure Core und Central Management Console

**Tabelle 8. Anforderungen für AppAssure Core und Central Management Console**

| Anforderung | Details |
|---|---|
| Betriebssystem | Der AppAssure Core unterstützt keine 32-Bit-Systeme und Linux-Systeme. Der AppAssure Core setzt eines der folgenden x64-Windows-Betriebssysteme voraus:<br>• Microsoft Windows 7<br>• Microsoft Windows 8, 8.1*<br>• Microsoft Windows Server 2008,2008 R2 (**außer** Core-Editionen)<br>• Microsoft Windows Server 2012, 2012 R2* (**außer** Core-Editionen)<br>**HINWEIS:** Auf Windows-Betriebssystemen muss .NET Framework 4.0x installiert sein, damit der AppAssure Core-Dienst ausgeführt werden kann. Darüber hinaus muss auf Betriebssystemen, die mit * markiert sind, die ASP .NET 4.5x-Rolle/Funktion installiert sein. Bei der Installation oder Aktualisierung des AppAssure Core überprüft das Installationsprogramm abhängig vom Betriebssystem des Core-Servers, ob diese Komponenten vorhanden sind. Die Komponenten werden dann bei Bedarf automatisch installiert oder aktualisiert.<br>Der AppAssure Core unterstützt alle x64-Editionen der aufgeführten Windows-Betriebssysteme, sofern keine anderen Angaben gemacht werden. Der AppAssure Core unterstützt keine Windows Server Core-Editionen.<br>Der AppAssure Core unterstützt das Basisbetriebssystem für jedes aufgeführte Betriebssystem sowie ein auf ein beliebiges verfügbares Service Pack aktualisiertes Betriebssystem, sofern keine anderen Angaben gemacht werden.<br>Für eine optimale Leistung wird empfohlen, den AppAssure Core unter Windows 8.1 (oder höher) und Windows Server 2012 (oder höher) zu installieren. |
| Architektur | Nur 64-Bit-Version |
| Arbeitsspeicher | Mindestens 8 GB RAM<br>**HINWEIS:** Dell empfiehlt dringend, ECC-Speicher zu verwenden, um eine optimale Leistung der AppAssure Core-Server sicherzustellen. |
| Prozessor | Quad-Core oder höher |
| Speicher | DAS, SAN oder NAS |
| Netzwerk | mind. 1-GB-Ethernet (GbE)<br>**HINWEIS:** Für extrem robuste Umgebungen empfiehlt Dell ein 10-GbE-Backbonenetzwerk. |

# Softwareanforderungen für den AppAssure Agent

**Tabelle 9. Softwareanforderungen für den AppAssure Agent**

| Anforderung | Details |
|---|---|
| | Die AppAssure Agent-Software unterstützt 32-Bit- und 64-Bit-Windows- und -Linux-Betriebssysteme. Dazu gehören:<br>• Microsoft Windows XP SP3 (nur Professional-Edition)<br>• Microsoft Windows Vista<br>• Microsoft Windows 7<br>• Microsoft Windows 8, 8.1*<br>• Microsoft Windows Server 2003, 2003 R2<br>• Microsoft Windows Server 2008, 2008 R2 (alle Editionen außer Windows Server 2008 Core)<br>• Microsoft Windows Server 2012, 2012 R2*<br>• Red Hat Enterprise Linux (RHEL) 6.3, 6.4, 6.5, 6.6, 7 (x64)<br>• CentOS Linux 6.3, 6.4, 6.5, 6.6, 7 (x64)<br>• Ubuntu Linux 12.04 LTS, 13.04, 14.04<br>• SUSE Linux Enterprise Server (SLES) 11 (SP2 und höher) |
| | **HINWEIS:** Auf Windows-Betriebssystemen muss Microsoft .NET Framework 4.0x installiert sein, damit der AppAssure Core-Dienst ausgeführt werden kann. Darüber hinaus muss auf Betriebssystemen, die mit * markiert sind, die ASP .NET 4.5x-Rolle/Funktion installiert sein. Bei der Installation oder Aktualisierung der AppAssure Agent-Software überprüft das Installationsprogramm, ob diese Komponenten vorhanden sind. Die Komponenten werden dann bei Bedarf automatisch installiert oder aktualisiert.<br>Die AppAssure unterstützt alle Editionen der aufgeführten Windows-Betriebssysteme, sofern keine anderen Angaben gemacht werden. Es wird nur die Professional-Edition von Windows XP unterstützt.<br>Die AppAssure Agent-Software unterstützt das Basisbetriebssystem für jedes aufgeführte Betriebssystem sowie ein auf ein beliebiges verfügbares Service Pack aktualisiertes Betriebssystem, sofern keine anderen Angaben gemacht werden. Geschützte Maschinen mit Windows XP müssen SP3 verwenden.<br>Die AppAssure Agent-Software unterstützt die Installation von Windows Server Core-Editionen für Windows 2008 R2, 2012 und 2012 R2. Lediglich bei Windows Server 2008 R2 Core muss SP1 oder höher installiert sein. Windows Server 2008 Core-Edition wird nicht unterstützt.<br>Die AppAssure Agent-Software unterstützt die in der Liste aufgeführten Linux-Distributionen. Die meisten freigegebenen Kernel-Versionen wurden getestet. Es werden nur ext3-, ext4- und xfs-Dateisysteme unterstützt.<br>Agenten, die unter Microsoft Hyper-V Server 2012 installiert sind, arbeiten im Core Edition-Modus von Windows Server 2012.<br>**HINWEIS:** Native Sicherungen von freigegebenen Cluster-Volumes werden nur auf geschützten Windows 2008 R2-Maschinen unterstützt. |
| Architektur | 32-Bit- oder 64-Bit-Version |
| Arbeits-speicher | Mind. 4 GB |
| Microsoft Exchange-Unterstützung | Microsoft Exchange 2007 SP1 Rollup 5 oder höher, Microsoft Exchange 2010 oder Microsoft Exchange 2013 |
| Microsoft SQL-Unterstützung | Microsoft SQL Server 2005 oder höher |

**Tabelle 9. Softwareanforderungen für den AppAssure Agent**

| Anforderung | Details |
|---|---|
| Speicher | DAS, SAN oder NAS |
| Netzwerk | mind. 1-GB-Ethernet (GbE)<br>**HINWEIS:** Für extrem robuste Umgebungen empfiehlt Dell ein 10-GbE-Backbonenetzwerk. |

Weitere Informationen zum Installieren des AppAssure Core, der Central Management Console und der Agent-Software finden Sie im *Dell AppAssure Installations- und Aktualisierungshandbuch*. Dieses Dokument enthält auch Informationen zur Migration von Replay 4 auf AppAssure sowie zur Aktualisierung von AppAssure (einschließlich bewährte Verfahren, Kompatibilität von Versionen der AppAssure Core- und Agent-Software sowie Aktualisierungsschritte). Das *AppAssure Installations- und Aktualisierungshandbuch* wurde bisher *AppAssure 5 Bereitstellungshandbuch* genannt.

Weitere Informationen zur Verwendung von AppAssure finden Sie im *Dell AppAssure Benutzerhandbuch*. Weitere Informationen zur Verwaltung von Dell AppAssure-Lizenzen finden Sie im *Dell AppAssure Lizenzportal Benutzerhandbuch*. Weitere Informationen zur Auslegung von Hardware, Software, Arbeitsspeicher, Speicher sowie Netzwerkanforderungen finden Sie im Dell AppAssure Knowledge Base-Artikel 118407, „Sizing AppAssure Deployments“.

# Upgrade und Kompatibilität

- Bei einem Upgrade von AppAssure 5.3.x auf AppAssure 5.4.x werden vorhandene Wiederherstellungspunkte in die neue Darstellung konvertiert. Beim ersten Start des AppAssure Core dauert das Laden der Wiederherstellungspunkte länger, erfolgt danach aber doppelt so schnell.
- Wichtige Informationen zur Abwärtskompatibilität zwischen AppAssure 5.3.x und AppAssure 5.4.x finden Sie in Hinweise zu früheren Releases.
- Wenn Sie auf replizierten Cores nach einer Aktualisierung von Release 5.3.x unterschiedliche Aufbewahrungsrichtlinien verwenden, werden Sie zuerst aufgefordert, den Integritätsprüfjob für Repositorys auszuführen.
- Benutzer eines 5.4.3-Betarelease müssen alle Cores und Agenten auf das offizielle Produktionsrelease von AppAssure 5.4.3 aktualisieren. Eine Interoperabilität von Betareleases und Produktionsreleases wird nicht unterstützt.

Weitere Informationen zu Aktualisierungs- und Kompatibilitätsproblemen finden Sie im Abschnitt „Aktualisieren von AppAssure“ im *AppAssure Installations- und Aktualisierungshandbuch*.

# Produktlizenzierung

### *So aktualisieren Sie eine Testlizenz*

Wenn Sie sich für eine Testversion von AppAssure registrieren, erhalten Sie ein Testkonto. Wenn Sie die AppAssure Core-Software vom Dell AppAssure-Lizenzportal herunterladen, wird automatisch ein Testlizenzschlüssel generiert. Dieser Lizenzschlüssel wird im Installationsprogramm für die AppAssure Core-Software gespeichert, damit Sie die Software installieren können. Um die Lizenz zu aktualisieren, müssen Sie sich an Ihren Dell Software-Vertriebsbeauftragten wenden oder eine E-Mail an sales@software.dell.com senden. Nachdem Sie die AppAssure-Lizenz aktualisiert oder gekauft haben, erhalten Sie eine E-Mail mit dem neuen Lizenzschlüssel. Sie müssen diesen Lizenzschlüssel in der Core Console eingeben.

### *So laden Sie die AppAssure-Software herunter und installieren Sie die Software:*

1 Registrieren Sie sich im Dell AppAssure-Lizenzportal unter http://license.appassure.com, um ein Konto zu erhalten. Sie müssen sich mit der E-Mail-Adresse registrieren, die Ihrem Dell Software-Vertriebsbeauftragten bekannt ist.

2 Melden Sie sich beim Lizenzportal an, nachdem die Kontoregistrierung durchgeführt wurde, und klicken Sie dann im linken Navigationsbereich auf **Downloads**.

3 Klicken Sie auf der Seite „Downloads“ auf die Schaltfläche **Download** neben Core Installer bzw. Core Web Installer, um die Core-Software herunterzuladen und zu installieren.

**HINWEIS:** Mit der Option „Core Installer“ wird die ausführbare Datei in einer Aufgabe heruntergeladen. Mit „Core Web Installer“ wird dagegen ein Download der aktuellsten Version des AppAssure Core Installers direkt aus dem Internet gestreamt. Dieser Vorgang kann nach Bedarf angehalten und fortgesetzt werden. Es wird automatisch ein Lizenzschlüssel generiert und bereitgestellt, damit Sie den Core verwenden können. Der Lizenzschlüssel wird auch in der Bestätigungs-E-Mail angegeben, die Sie nach Auswahl der Downloadoption erhalten.

4 Klicken Sie in den nachfolgend angezeigten Dialogfeldern auf **Ausführen**, um die Software zu installieren.

5 Klicken Sie auf der Seite „Downloads“ neben der Agent Installer-Version für Windows oder Linux, die Sie herunterladen möchten, auf die Schaltfläche **Download**, um die Agent-Software herunterzuladen und zu installieren.

6 Klicken Sie in den nachfolgend angezeigten Dialogfeldern auf **Ausführen**, um die Software zu installieren.

7 Rufen Sie die AppAssure Core Console auf, nachdem Sie die Software installiert haben, um die Testlizenz auf die aktualisierte oder gekaufte Lizenz zu aktualisieren.

8 Navigieren Sie zur Registerkarte **Konfiguration** und klicken Sie auf **Lizenzierung**.

9 Klicken Sie im Bereich „Lizenzdetails“ auf **Lizenz ändern**.

10 Führen Sie im Dialogfeld „Lizenz ändern“ die folgenden Schritte aus, um eine Lizenzdatei hochzuladen:

- Wählen Sie **Lizenzdatei hochladen** aus und klicken Sie auf **Durchsuchen**.
- Suchen und markieren Sie im Dialogfeld „Datei hochladen“ die Lizenzdatei und klicken Sie auf **Öffnen**.

11 Führen Sie im Dialogfeld „Lizenz ändern“ die folgenden Schritte aus, um einen Lizenzschlüssel einzugeben:

- Wählen Sie **Lizenzschlüssel eingeben** aus.
- Geben Sie im Textfeld für den Lizenzschlüssel den Lizenzschlüssel ein und klicken Sie auf **Weiter**.

12 Klicken Sie unter „Lizenzserver“ auf **Jetzt Kontakt aufnehmen**. Nachdem die Lizenz im Lizenzserver registriert wurde, werden alle zugehörigen Agenten automatisch mit der neuen Lizenz aktualisiert.

# Einführung in AppAssure 5.4.3


- Aktualisierungs- und Installationsanweisungen
- Weitere Ressourcen


# Aktualisierungs- und Installationsanweisungen

Sie müssen sich im Dell AppAssure-Lizenzportal registrieren, um die AppAssure Core- und Agent-Software herunterzuladen. Nach einer erfolgreichen Registrierung können Sie die Software herunterladen, einen AppAssure Core installieren und Maschinen auf dem Core schützen. Beim Herunterladen des Core wird automatisch ein Lizenzschlüssel generiert. Sie müssen den Lizenzschlüssel erfassen und eingeben, um den Core herunterzuladen, zu verwalten und zu konfigurieren. Weitere Details finden Sie im *Dell AppAssure Lizenzportal Benutzerhandbuch*.

Informationen zur Migration von Replay 4 auf AppAssure bzw. zur Aktualisierung eines früheren Release von AppAssure finden Sie im *Dell AppAssure Installations- und Aktualisierungshandbuch*.

# Weitere Ressourcen

Die folgenden zusätzlichen Informationsquellen sind verfügbar:

- Technische Dokumentation
- Videos und Lernprogramme
- Knowledge Base
- Technisches Supportforum
- Schulung und Zertifizierung
- Dell AppAssure Lizenzportal

# Globalisierung

Dieser Abschnitt enthält Informationen zu Installation und Betrieb dieses Produkts in anderen Sprachkonfigurationen als Englisch, die beispielsweise von Kunden außerhalb von Nordamerika benötigt werden. Dieser Abschnitt ersetzt nicht die Unterlagen zu unterstützten Plattformen und Konfigurationen an anderen Stellen in der Produktdokumentation.

Dieses Release ist Unicode-fähig und unterstützt alle Zeichensätze. In diesem Release müssen alle Produktkomponenten für die Verwendung identischer oder kompatibler Zeichencodierungen konfiguriert und für die Verwendung derselben Länder- und Regionsoptionen installiert werden. Dieses Release kann in den folgenden Regionen eingesetzt werden: Nordamerika, Westeuropa und Lateinamerika, Mittel- und Osteuropa, Ostasien, Japan. Es unterstützt bidirektionale Schreibweisen (Arabisch und Hebräisch). Das Release unterstützt Complex Script (Zentralasien – Indien, Thailand).

Das Release ist in die folgenden Sprachen lokalisiert: Chinesisch (vereinfacht), Französisch, Koreanisch, Deutsch, Japanisch, Portugiesisch (Brasilien), Spanisch.

Für dieses Release gelten die folgende bekannten Eigenschaften oder Beschränkungen: Protokolle und KB-Artikel sind nur in Englisch verfügbar.

# Informationen zu Dell

Dell berücksichtigt die Wünsche seiner Kunden und liefert auf der ganzen Welt innovative Technologien, Geschäftslösungen und Dienstleistungen, die anerkannt und geschätzt werden. Weitere Informationen finden Sie unter www.software.dell.com/de-de.

# Kontakt zu Dell

**Technischer Support:**
Online-Support

**Produktfragen und Vertrieb:**
0800 800-78378

**E-Mail:**
info@software.dell.com

# Technische Supportressourcen

Der technische Support steht Kunden, die Dell-Software mit einem gültigen Wartungsvertrag gekauft haben, und Kunden zur Verfügung, die über eine Testversion verfügen. Das Support Portal ist unter https://support.software.dell.com/de-de/ erreichbar.

Das Support Portal stellt Selbsthilfetools bereit, mit denen Sie Probleme schnell und eigenständig lösen können – 24 Stunden am Tag, 365 Tage im Jahr. Darüber hinaus ermöglicht das Portal über ein Online-Serviceanforderungssystem auch direkten Zugang zu unseren Produktsupporttechnikern.

Das Portal bietet folgende Möglichkeiten:

- Erstellen, Aktualisieren und Verwalten von Serviceanforderungen (Supportfälle)
- Anzeigen von Knowledge Base-Artikeln
- Erhalten von Produktbenachrichtigungen
- Herunterladen von Software. Testsoftware finden Sie unter Testdownloads.
- Anzeigen von Videos zur Vorgehensweise
- Teilnahme an Communitydiskussionen
- Chatten mit einem Supporttechniker
- Anzeigen oder Herunterladen von Dokumentation im HTML- oder PDF-Format (Die Produktdokumentation finden Sie unter https://support.software.dell.com/appassure/5.4.3/release-notes-guides.)

# Third-party contributions

This product contains the third-party components listed below. For third-party license information, go to http://software.dell.com/legal/license-agreements.aspx. Source code for components marked with an asterisk (*) is available at http://opensource.dell.com.

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| AlphaVSS 1.2.4000 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| ANTLR 3.3 | BSD ANTLR 3 | Copyright (c) 2010 Terence Parr<br>A copy of this license can be found below at ANTLR 3 License and at http://software.dell.com/legal/third-party-licenses.aspx. |
| ANTLR 4.0.2 | BSD ANTLR 4 | Copyright (c) 2012 Terence Parr and Sam Harwell<br>A copy of this license can be found below at ANTLR 4 License and at http://software.dell.com/legal/third-party-licenses.aspx. |
| AWS SDK for .NET 1.5.50 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| | | |
| Castle Windsor 2.5.1 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| DataGridViewImageAnimator 1.0 | Creative Commons Attribution-ShareAlike Unported 3.0 | A copy of this license can be found below at Creative Commons Attribution-ShareAlike Unported 3.0.<br>See also http://creativecommons.org/licenses/by-sa/3.0/legalcode. |
| Emit Mapper 1.0.0.0 | LGPL (GNU Lesser General Public License) 2.1 | A copy of this license can be found below at LGPL (GNU Lesser General Public License) 2.1. |
| Integrated Performance Primitives 6.1.2 | Intel Software license May 2012 | A copy of this license can be found below at Intel Software license May 2012 and at http://software.dell.com/legal/third-party-licenses.aspx. |
| Integrated Performance Primitives 7.0.6 | Intel Software license May 2012 | A copy of this license can be found below at Intel Software license May 2012 and at http://software.dell.com/legal/third-party-licenses.aspx. |
| ISOLINUX 4.05 20120131* | GPL (GNU General Public License) 2.0 | A copy of this license can be found below at GPL (GNU General Public License) 2.0 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| jqGrid 4.4.1 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| jqrowl 1.2.6 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| JQuery 1.8.2 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| jQuery knob 1.2.0 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| jQuery Templates 1.0.0.0 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| JQuery UI 1.9.1 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| jQuery Validation 1.9.0 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| jQuery Viewport | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Json.NET 4.5 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| jsTree 1.0-rc3 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| libext2fs 1.42.6 | LGPL (GNU Lesser General Public License) 2.1 | A copy of this license can be found below at LGPL (GNU Lesser General Public License) 2.1 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| libssh2 1.4.3 | BSD-style N/A | Portions Copyright 2002-2010 Atsuhiko Yamanaka, JCraft,Inc.<br>A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Log4Net 1.2.10 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| man 3.0.7 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| MarkdownSharp 1.13 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| memtest86+ 4.20* | GPL (GNU General Public License) 2.0 | A copy of this license can be found below at GPL (GNU General Public License) 2.0 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| Microsoft Reactive Extensions for .NET 2.1 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| Microsoft Windows Azure Storage 2.0.6 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| MongoDB 2.0.6 | GNU Affero GPL 3.0<br>Apache 2.0 | The MongoDB Database Server and Tools are licensed by the Affero GPL v.3.0 license, which can be found at http://software.dell.com/legal/third-party-licenses.aspx.<br>The mongodb.org supported drivers are licensed by Apache v.2.0, which can be found below at Apache 2.0 and at http://software.dell.com/legal/third-party-licenses.aspx. |
| MongoDB 10gen driver 1.4.2 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| Mono 3.0.7* | LGPL (GNU Lesser General Public License) 2.1 | A copy of this license can be found below at LGPL (GNU Lesser General Public License) 2.1 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx.<br>Subcomponents are licensed by the particular license that comes with each subcomponent.<br>The Mono code under the mcs/ directory is licensed under various different licenses:<br>• GNU GPL: details available in the file LICENSE.GPL<br>• GNU LGPL: details available in the file LICENSE.LGPL<br>• MIT X11: text available in the file MIT.X11<br>• MPL: text available in the file LICENSE.MPL<br>For your convenience copies of the GNU GPL and GNU LGPL are located in the file COPYING and COPYING.LIB.<br>Class Libraries:<br>All of the core classes licensed under the terms of the MIT X11 license.<br>Third party libraries that we distribute for convenience reasons are distributed under their own terms (all of them allow development of proprietary applications with them).<br>Third party libraries include: ByteFX.Data, ICSharpCode.SharpZipLib, Npgsql, MicrosoftAjaxLibrary.<br>The Microsoft.JScript assembly is covered by the MIT X11 and the Mozilla MPL license as it contains ported pieces of code from Rhino, the Mozilla JavaScript implementations.<br>• Mono C# compiler: Dual licensed MIT X11 and GNU GPL.<br>• Mono Basic compiler: GNU GPL.<br>• Various tools in the 'tools' directory: GNU GPL. |
| Mono class libraries 3.0.7 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Mono eglib 3.0.7 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Mono Garbage Collector 3.0.7 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| Mono Support 3.0.7 | LGPL (GNU Lesser General Public License) 2.1 | A copy of this license can be found below at LGPL (GNU Lesser General Public License) 2.1 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| mono tools 3.0.7 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Mono VM 3.0.7 | LGPL (GNU Lesser General Public License) 2.1 | A copy of this license can be found below at LGPL (GNU Lesser General Public License) 2.1 and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| Moq 4.0.10818.0 | BSD Moq 4.0.10818.0 | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| msc/jay 3.0.7 | BSD-style license N/A | A copy of this license can be found below at BSD-style license N/A and at http://software.dell.com/legal/third-party-licenses.aspx. |
| NDesk.Options 0.2.1 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Newtonsoft.Json.dll 4.5.9 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Newtonsoft.Json.dll 5.0.6 | MIT Json.NET N/A | A copy of this license can be found below at MIT Json.NET N/A and at http://software.dell.com/legal/third-party-licenses.aspx.<br>The full text of the license may be found on our website at http://software.dell.com/legal/license-agreements.aspx. |
| NLog 2.0 | BSD NLog 2.0 | Portions copyright 2011 Jaroslaw Kowalski.<br>A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| OpenStack.NET 1.2.0.1 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| PowerCollections 2007* | Eclipse Public License 1.0 | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx and at http://software.dell.com/legal/license-agreements.aspx. |

**Table 10. List of third-party contributions**

| Component | License or acknowledgment | Notes |
|---|---|---|
| Prism 4.0 | Prism 4.0 | Contains software or other content adapted from Microsoft patterns & practices ObjectBuilder, © 2006 Microsoft Corporation. All rights reserved.<br>A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Protobuf-net 2.0.0.627 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| Quartz.NET 2.1.2 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| Raphaël--JavaScript Library 2.1.1 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| RazorGenerator 2.1 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |
| Resize Floating Popup Control Revision 3 | Code Project Open License (CPOL) 1.02 | A copy of this license can be found below at Code Project Open License (CPOL) and at http://software.dell.com/legal/third-party-licenses.aspx. |
| RTF Converter 1.1 | Code Project Open License (CPOL) 1.02 | A copy of this license can be found below at Code Project Open License (CPOL) and at http://software.dell.com/legal/third-party-licenses.aspx. |
| SimpleRestServices 1.2.0.0 | MIT N/A | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| Sparsehash 1.11 | BSD CodePlex | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| SSH.Net 2013.4.7 | BSD CodePlex | A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| TextFileEncodingDetector 1.0 | BSD TextFileEncodingDetector 1.0 | Copyright 2002-2008 Xiph.org Foundation<br>Copyright 2002-2008 Jean-Marc Valin<br>Copyright 2005-2007 Analog Devices Inc.<br>Copyright 2005-2008 Commonwealth Scientific and Industrial Research Organisation (CSIRO)<br>Copyright 1993, 2002, 2006 David Rowe<br>Copyright 2003 EpicGames<br>Copyright 1992-1994 Jutta Degener, Carsten Bormann<br>A copy of this license can be found at http://software.dell.com/legal/third-party-licenses.aspx. |
| WebGrease 1.1 | Apache 2.0 | A copy of this license can be found below at Apache 2.0. |

# ANTLR 3 License

[The BSD License]

Copyright (c) 2010 Terence Parr

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

•Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

•Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

•Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

# ANTLR 4 License

[The BSD License]

Copyright (c) 2012 Terence Parr and Sam Harwell

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

# Apache 2.0

License Text

Apache License

Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily

infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

# Creative Commons Attribution-ShareAlike Unported 3.0

License Text

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS LICENSE DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE INFORMATION PROVIDED, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM ITS USE.

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. TO THE EXTENT THIS LICENSE MAY BE CONSIDERED TO BE A CONTRACT, THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

a."Adaptation" means a work based upon the Work, or upon the Work and other pre-existing works, such as a translation, adaptation, derivative work, arrangement of music or other alterations of a literary or artistic work, or phonogram or performance and includes cinematographic adaptations or any other form in which the Work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work that constitutes a Collection will not be considered an Adaptation for the purpose of this License. For the avoidance of doubt, where the Work is a musical work, performance or phonogram, the synchronization of the Work in timed-relation with a moving image ("synching") will be considered an Adaptation for the purpose of this License.

b."Collection" means a collection of literary or artistic works, such as encyclopedias and anthologies, or performances, phonograms or broadcasts, or other works or subject matter other than works listed in Section 1(f) below, which, by reason of the selection and arrangement of their contents, constitute intellectual creations, in which the Work is included in its entirety in unmodified form along with one or more other contributions, each constituting separate and independent works in themselves, which together are assembled into a collective whole. A work that constitutes a Collection will not be considered an Adaptation (as defined below) for the purposes of this License.

c."Creative Commons Compatible License" means a license that is listed at http://creativecommons.org/compatiblelicenses that has been approved by Creative Commons as being essentially equivalent to this License, including, at a minimum, because that license: (i) contains terms that have the same purpose, meaning and effect as the License Elements of this License; and, (ii) explicitly permits the relicensing of adaptations of works made available under that license under this License or a Creative Commons jurisdiction license with the same License Elements as this License.

d."Distribute" means to make available to the public the original and copies of the Work or Adaptation, as appropriate, through sale or other transfer of ownership.

e."License Elements" means the following high-level license attributes as selected by Licensor and indicated in the title of this License: Attribution, ShareAlike.

f."Licensor" means the individual, individuals, entity or entities that offer(s) the Work under the terms of this License.

g."Original Author" means, in the case of a literary or artistic work, the individual, individuals, entity or entities who created the Work or if no individual or entity can be identified, the publisher; and in addition (i) in the case of a performance the actors, singers, musicians, dancers, and other persons who act, sing, deliver, declaim, play in, interpret or otherwise perform literary or artistic works or expressions of folklore; (ii) in the case of a phonogram the producer being the person or legal entity who first fixes the sounds of a performance or other sounds; and, (iii) in the case of broadcasts, the organization that transmits the broadcast.

h."Work" means the literary and/or artistic work offered under the terms of this License including without limitation any production in the literary, scientific and artistic domain, whatever may be the mode or form of

its expression including digital form, such as a book, pamphlet and other writing; a lecture, address, sermon or other work of the same nature; a dramatic or dramatico-musical work; a choreographic work or entertainment in dumb show; a musical composition with or without words; a cinematographic work to which are assimilated works expressed by a process analogous to cinematography; a work of drawing, painting, architecture, sculpture, engraving or lithography; a photographic work to which are assimilated works expressed by a process analogous to photography; a work of applied art; an illustration, map, plan, sketch or three-dimensional work relative to geography, topography, architecture or science; a performance; a broadcast; a phonogram; a compilation of data to the extent it is protected as a copyrightable work; or a work performed by a variety or circus performer to the extent it is not otherwise considered a literary or artistic work.

i."You" means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.

j."Publicly Perform" means to perform public recitations of the Work and to communicate to the public those public recitations, by any means or process, including by wire or wireless means or public digital performances; to make available to the public Works in such a way that members of the public may access these Works from a place and at a place individually chosen by them; to perform the Work to the public by any means or process and the communication to the public of the performances of the Work, including by public digital performance; to broadcast and rebroadcast the Work by any means including signs, sounds or images.

k."Reproduce" means to make copies of the Work by any means including without limitation by sound or visual recordings and the right of fixation and reproducing fixations of the Work, including storage of a protected performance or phonogram in digital form or other electronic medium.

2. Fair Dealing Rights. Nothing in this License is intended to reduce, limit, or restrict any uses free from copyright or rights arising from limitations or exceptions that are provided for in connection with the copyright protection under copyright law or other applicable laws.

3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

a.to Reproduce the Work, to incorporate the Work into one or more Collections, and to Reproduce the Work as incorporated in the Collections;

b.to create and Reproduce Adaptations provided that any such Adaptation, including any translation in any medium, takes reasonable steps to clearly label, demarcate or otherwise identify that changes were made to the original Work. For example, a translation could be marked "The original work was translated from English to Spanish," or a modification could indicate "The original work has been modified.";

c.to Distribute and Publicly Perform the Work including as incorporated in Collections; and,

d.to Distribute and Publicly Perform Adaptations.

e.

For the avoidance of doubt:

i.Non-waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme cannot be waived, the Licensor reserves the exclusive right to collect such royalties for any exercise by You of the rights granted under this License;

ii.Waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme can be waived, the Licensor waives the exclusive right to collect such royalties for any exercise by You of the rights granted under this License; and,

iii.Voluntary License Schemes. The Licensor waives the right to collect royalties, whether individually or, in the event that the Licensor is a member of a collecting society that administers voluntary licensing schemes, via that society, from any exercise by You of the rights granted under this License.

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. Subject to Section 8(f), all rights not expressly granted by Licensor are hereby reserved.

4. Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

a.You may Distribute or Publicly Perform the Work only under the terms of this License. You must include a copy of, or the Uniform Resource Identifier (URI) for, this License with every copy of the Work You Distribute or Publicly Perform. You may not offer or impose any terms on the Work that restrict the terms of this License or the ability of the recipient of the Work to exercise the rights granted to that recipient under the terms of the License. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties with every copy of the Work You Distribute or Publicly Perform. When You Distribute or Publicly Perform the Work, You may not impose any effective technological measures on the Work that restrict the ability of a recipient of the Work from You to exercise the rights granted to that recipient under the terms of the License. This Section 4(a) applies to the Work as incorporated in a Collection, but this does not require the Collection apart from the Work itself to be made subject to the terms of this License. If You create a Collection, upon notice from any Licensor You must, to the extent practicable, remove from the Collection any credit as required by Section 4(c), as requested. If You create an Adaptation, upon notice from any Licensor You must, to the extent practicable, remove from the Adaptation any credit as required by Section 4(c), as requested.

b.You may Distribute or Publicly Perform an Adaptation only under the terms of: (i) this License; (ii) a later version of this License with the same License Elements as this License; (iii) a Creative Commons jurisdiction license (either this or a later license version) that contains the same License Elements as this License (e.g., Attribution-ShareAlike 3.0 US)); (iv) a Creative Commons Compatible License. If you license the Adaptation under one of the licenses mentioned in (iv), you must comply with the terms of that license. If you license the Adaptation under the terms of any of the licenses mentioned in (i), (ii) or (iii) (the "Applicable License"), you must comply with the terms of the Applicable License generally and the following provisions: (I) You must include a copy of, or the URI for, the Applicable License with every copy of each Adaptation You Distribute or Publicly Perform; (II) You may not offer or impose any terms on the Adaptation that restrict the terms of the Applicable License or the ability of the recipient of the Adaptation to exercise the rights granted to that recipient under the terms of the Applicable License; (III) You must keep intact all notices that refer to the Applicable License and to the disclaimer of warranties with every copy of the Work as included in the Adaptation You Distribute or Publicly Perform; (IV) when You Distribute or Publicly Perform the Adaptation, You may not impose any effective technological measures on the Adaptation that restrict the ability of a recipient of the Adaptation from You to exercise the rights granted to that recipient under the terms of the Applicable License. This Section 4(b) applies to the Adaptation as incorporated in a Collection, but this does not require the Collection apart from the Adaptation itself to be made subject to the terms of the Applicable License.

c.If You Distribute, or Publicly Perform the Work or any Adaptations or Collections, You must, unless a request has been made pursuant to Section 4(a), keep intact all copyright notices for the Work and provide, reasonable to the medium or means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) if supplied, and/or if the Original Author and/or Licensor designate another party or parties (e.g., a sponsor institute, publishing entity, journal) for attribution ("Attribution Parties") in Licensor's copyright notice, terms of service or by other reasonable means, the name of such party or parties; (ii) the title of the Work if supplied; (iii) to the extent reasonably practicable, the URI, if any, that Licensor specifies to be associated with the Work, unless such URI does not refer to the copyright notice or licensing information for the Work; and (iv) , consistent with Ssection 3(b), in the case of an Adaptation, a credit identifying the use of the Work in the Adaptation (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). The credit required by this Section 4(c) may be implemented in any reasonable manner; provided, however, that in the case of a Adaptation or Collection, at a minimum such credit will appear, if a credit for all contributing authors of the Adaptation or Collection appears, then as part of these credits and in a manner at least as prominent as the credits for the other contributing authors. For the avoidance of doubt, You may only use the credit required by this Section for the purpose of attribution in the manner set out above and, by exercising Your rights under this License, You may not implicitly or explicitly assert or imply any connection with, sponsorship or endorsement by the Original Author, Licensor and/or Attribution Parties, as appropriate, of You or Your use of the Work, without the separate, express prior written permission of the Original Author, Licensor and/or Attribution Parties.

d.Except as otherwise agreed in writing by the Licensor or as may be otherwise permitted by applicable law, if You Reproduce, Distribute or Publicly Perform the Work either by itself or as part of any Adaptations or Collections, You must not distort, mutilate, modify or take other derogatory action in relation to the Work which would be prejudicial to the Original Author's honor or reputation. Licensor agrees that in those jurisdictions (e.g. Japan), in which any exercise of the right granted in Section 3(b) of this License (the right to make Adaptations) would be deemed to be a distortion, mutilation, modification or other derogatory action prejudicial to the Original Author's honor and reputation, the Licensor will waive or not assert, as appropriate,

this Section, to the fullest extent permitted by the applicable national law, to enable You to reasonably exercise Your right under Section 3(b) of this License (right to make Adaptations) but not otherwise.

5. Representations, Warranties and Disclaimer

UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE WORK, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

a.This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Adaptations or Collections from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.

b.Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

8. Miscellaneous

a.Each time You Distribute or Publicly Perform the Work or a Collection, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.

b.Each time You Distribute or Publicly Perform an Adaptation, Licensor offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License.

c.If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

d.No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

e.This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensor and You.

f.The rights granted under, and the subject matter referenced, in this License were drafted utilizing the terminology of the Berne Convention for the Protection of Literary and Artistic Works (as amended on September 28, 1979), the Rome Convention of 1961, the WIPO Copyright Treaty of 1996, the WIPO Performances and Phonograms Treaty of 1996 and the Universal Copyright Convention (as revised on July 24, 1971). These rights and subject matter take effect in the relevant jurisdiction in which the License terms are sought to be enforced according to the corresponding provisions of the implementation of those treaty provisions in the applicable national law. If the standard suite of rights granted under applicable copyright law includes additional rights not granted under this License, such additional rights are deemed to be included in the License; this License is not intended to restrict the license of any rights under applicable law.

Creative Commons Notice

Creative Commons is not a party to this License, and makes no warranty whatsoever in connection with the Work. Creative Commons will not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to

this license. Notwithstanding the foregoing two (2) sentences, if Creative Commons has expressly identified itself as the Licensor hereunder, it shall have all rights and obligations of Licensor.

Except for the limited purpose of indicating to the public that the Work is licensed under the CCPL, Creative Commons does not authorize the use by either party of the trademark "Creative Commons" or any related trademark or logo of Creative Commons without the prior written consent of Creative Commons. Any permitted use will be in compliance with Creative Commons' then-current trademark usage guidelines, as may be published on its website or otherwise made available upon request from time to time. For the avoidance of doubt, this trademark restriction does not form part of the License.

Creative Commons may be contacted at http://creativecommons.org/.

# Intel Software license May 2012

License Text

End User License Agreement for the Intel(R) Software Development Products

(Version May 2012)

1. LICENSE DEFINITIONS:

A. "Materials" are defined as the software, documentation, license key codes (if applicable) and other materials, including any updates and upgrade thereto, that are provided to you under this Agreement. Materials also include the Redistributables, Cluster OpenMP Library, and Sample Source as defined below.

B. "Redistributables" are the files listed in the following text files that may be included in the Materials for the applicable Intel Software Development Product: clredist.txt, credist.txt, fredist.txt, redist.txt, redist-rt.txt.

C. “Cluster OpenMP Library”, is comprised of the files listed in the “clredist.txt” file specified above, is the Intel(R) Cluster OpenMP* Library add-on option to the Intel(R) C++ Compiler for Linux* and Intel(R) Fortran Compiler for Linux* products (“Intel Compiler for Linux”). The use of the Cluster OpenMP Library is conditioned on having a valid license from Intel for the Cluster OpenMP Library and for either Intel(R) C++ Compiler for Linux or Intel(R) Fortran Compiler for Linux, and further is governed by the terms and conditions of the license agreement for applicable the Intel Compiler for Linux.

D. “Source Code” is defined as the Materials provided in human readable format, and includes modification that you make or are made on your behalf.

E. "Sample Source" is the Source Code file(s) that: (i) demonstrate certain limited functions included in the binary libraries of the Intel(R) Integrated Performance Primitives (“Intel(R) IPPs”); (ii) are identified as Intel IPP sample source code; (iii) are obtained separately from Intel after you register your copy of the Intel(R) IPPs product with Intel; and (iv) are subject to all of the terms and conditions of this Agreement.

F. “Microsoft Platforms” means any current and future Microsoft operating system products, Microsoft run-time technologies (such as the .NET Framework), and Microsoft application platforms (such as Microsoft Office or Microsoft Dynamics) that Microsoft offers.

2. LICENSE GRANT:

A. Subject to all of the terms and conditions of this Agreement, Intel Corporation ("Intel") grants to you a non-exclusive, non-assignable, copyright license to use the Materials.

B. Subject to all of the terms and conditions of this Agreement, Intel grants to you a non-exclusive, non-assignable copyright license to modify the Materials, or any portions thereof, that are (i) provided in Source Code form or, (ii) are defined as Redistributables and are provided in text form.

C. Subject to all of the terms and conditions of this Agreement and any specific restrictions which may appear in the Redistributables text files, Intel grants to you a non-exclusive, non-assignable, fully-paid copyright license to distribute (except if you received the Materials under an Evaluation License as specified below) the Redistributables, including any modifications pursuant to Section 2.B, or any portions thereof, as part of the product or application you developed using the Materials. If such application is a software development library, then attribution, as specified in the product release

notes of the corresponding Materials shall be displayed prominently in that product’s or application’s associated documentation and on the product or application’s web site (if any).

3. LICENSE RESTRICTIONS:

A. If you receive your first copy of the Materials electronically, and a second copy on media, then you may use the second copy only in accordance with your applicable license stated in this Agreement, or for backup or archival purposes. You may not provide the second copy to another user.

B. You may NOT: (i) use, copy, distribute, or publicly display the Materials except as provided in this Agreement; (ii) rent or lease the Materials to any third party; (iii) assign this Agreement or transfer the Materials without the express written consent of Intel; (iv) modify, adapt, or translate the Materials in whole or in part except as provided in this Agreement; (v) reverse engineer, decompile, or disassemble the Materials; (vi) attempt to modify or tamper with the normal function of a license manager that regulates usage of the Materials; (vii) distribute, sublicense or transfer the Source Code form of any components of the Materials or derivatives thereof to any third party except as provided in this Agreement; (viii) distribute Redistributables except as part of a larger program that adds significant primary functionality different from that of the Redistributables; (ix) distribute the Redistributables to run on a platform other than a Microsoft Platform if per the accompanying user documentation the Materials are meant to execute only on a Microsoft Platform; (x) include the Redistributables in malicious, deceptive, or unlawful programs; or (xi) modify or distribute the Source Code of any Redistributable so that any part of it becomes subject to an Excluded License. An “Excluded License” is one that requires, as a condition of use, modification, or distribution, that the licensed software or other software incorporated into, derived from or distributed with such software (a) be disclosed or distributed in Source Code form; (b) be licensed by the user to third parties for the purpose of making and/or distributing derivative works; or (c) be redistributable at no charge. Open source software includes, without limitation, software licensed or distributed under any of the following licenses or distribution models, or licenses or distribution models substantially similar to any of the following: (a) GNU’s General Public License (GPL) or Lesser/Library GPL (LGPL), (b) the Artistic License (e.g., PERL), (c) the Mozilla Public License, (d) the Netscape Public License, (e) the Sun Community Source License (SCSL), (f) the Sun Industry Source License (SISL), and (g) the Common Public License (CPL).

C. The scope and term of your license depends on the type of license you are provided by Intel. The variety of license types are set forth below, which may not be available for all "Intel(R) Software Development Products" and therefore may not apply to the Materials. For more information on the types of licenses, please contact Intel or your sales representative.

i. PRE-RELEASE LICENSE: If you are using the Materials under the control of a pre-release license, (a) the Materials are deemed to be pre-release code (e.g., alpha or beta release, etc), which may not be fully functional and which Intel may substantially modify in development of a commercial version, and for which Intel makes no assurances that it will ever develop or make generally available a commercial version, and (b) if you are an individual, you have the right to use the Materials only for the duration of the pre-release term, which is specified in the Materials, or until the commercial release, if any, of the Materials, whichever is shorter. You may install copies of the Materials on an unlimited number of computers provided that you are the only individual using the Materials and only one copy of the Materials is in use at any one time. A separate license is required for each additional use and/or individual user in all other cases, including without limitation, use by persons, computer systems, and other use methods known now and in the future. If you are an entity, Intel grants you the right to designate one individual within your organization to have the sole right to use the Materials in the manner specified provided above.

ii. EVALUATION LICENSE: If you are using the Materials under the control of an evaluation license, you as an individual may use the Materials only for internal evaluation purposes and only for the term of the evaluation, which may be controlled by the license key code for the Materials. NOTWITHSTANDING ANYTHING TO THE CONTRARY ELSEWHERE IN THIS AGREEMENT, YOU MAY NOT DISTRIBUTE ANY PORTION OF THE MATERIALS, AND THE

APPLICATION AND/OR PRODUCT DEVELOPED BY YOU MAY ONLY BE USED FOR EVALUATION PURPOSES AND ONLY FOR THE TERM OF THE EVALUATION. You may install copies of the Materials on a reasonable number of computers to conduct your evaluation provided that you are the only individual using the Materials and only one copy of the Materials is in use at any one time. A separate license is required for each additional use and/or individual user in all other cases, including without limitation, use by persons, computer systems, and other use methods known now and in the future. Intel may provide you with a license code key that enables the Materials for an evaluation license. If you are an entity, Intel grants you the right to designate one individual within your organization to have the sole right to use the Materials in the manner provided above.

iii. NONCOMMERCIAL-USE LICENSE: If you are using the Materials under the control of a noncommercial-use license, if you are an individual, you as an individual may use the Materials only for non-commercial use where you receive no fee, salary or any other form of compensation. The Materials may not be used for any other

purpose, whether "for profit" or "not for profit." Any work performed or produced as a result of use of the Materials cannot be performed or produced for the benefit of other parties for a fee, compensation or any other reimbursement or remuneration. You may install copies of the Materials on an unlimited number of computers provided that you are the only individual using the Materials and only one copy of the Materials is in use at any one time. A separate license is required for each additional use and/or individual user in all other cases, including without limitation, use by persons, computer systems, and other methods of use known now and in the future. Intel will provide you with a license code key that enables the Materials for a noncommercial-use license. If you obtained a time-limited noncommercial-use license, the duration (time period) of your license and your ability to use the Materials is limited to the time period of the obtained license, which is controlled by the license key code for the Materials. If you are an entity, Intel grants you the right to designate one individual within your organization to have the sole right to use the Materials in the manner provided above.

iv. SINGLE-USER LICENSE: If you are using the Materials under the control of a single-user license, you as an individual may install and use the Materials on an unlimited number of computers provided that you are the only individual using the Materials and only one copy of the Materials is in use at any one time. A separate license is required for each additional use and/or individual user in all other cases, including without limitation, use by persons, computer systems, and other methods of use known now and in the future. Intel will provide you with a license code key that enables the Materials for a single-user license. If you obtained a time-limited single-user license, the term of your license and your ability to use the Materials is limited to the specified time period, which is controlled by the license key code for the Materials. If you are an entity, Intel grants you the right to designate one individual within your organization to have the sole right to use the Materials in the manner provided above.

v. NODE-LOCKED LICENSE: If you are using the Materials under the control of a node-locked license, you may use the Materials only on a single designated computer by no more than the authorized number of concurrent users. A separate license is required for each additional concurrent user and use, and/or computer systems in all other cases, including without limitation, use by persons, computer systems, and other methods of use known now and in the future. Intel will provide you with a license code key that enables the Materials for a Node-Locked license up to the authorized number of concurrent users. If you obtained a time-limited node-locked license, the term of your license and your ability to use the Materials is limited to the specified time, which is controlled by the license key code for the Materials.

vi. FLOATING LICENSE: If you are using the Materials under the control of a floating license, you may (a) install the Materials on an unlimited number of computers that are connected to the designated network and (b) use the Material by no more than the authorized number of concurrent individual users. A separate license is required for each additional concurrent individual user and each additional use by a computer system and/or network on which the Materials are used. You understand that you must obtain a separate license for every and any use of the Materials under a floating license, regardless of whether such use is, without

limitation, by persons, computer systems, and other methods of use known now and in the future. Intel will provide you with a license code key that enables the Materials for a floating license up to the authorized number of concurrent users. If you obtained a time-limited Floating license, the duration (time period) of your license and your ability to use the Materials is limited to the time period of the obtained license, which is controlled by the license key code for the Materials. Intel Library Floating License: If the Materials are the Intel(R) Math Kernel Library or the Intel(R) Integrated Performance Primitives Library or the Intel(R) Threading Building Blocks (either "Intel Library"), then the Intel Library is provided to you as an add-on option to either the Intel(R) C++ Compiler product or the Intel(R) Fortran Compiler product (either, an "Intel Compiler") for which you have a Floating license, and as such, in addition to the terms and conditions above, the Intel Library may only be used by the authorized concurrent users (as noted above) of that Intel Compiler Floating license.

D. DISTRIBUTION: Distribution of the Redistributables is also subject to the following limitations: You (i) shall be solely responsible to your customers for any update or support obligation or other liability which may arise from the distribution, (ii) shall not make any statement that your product is "certified", or that its performance is guaranteed, by Intel, (iii) shall not use Intel's name or trademarks to market your product without written permission, (iv) shall use a license agreement that prohibits disassembly and reverse engineering of the Redistributables, (v) shall indemnify, hold harmless, and defend Intel and its suppliers from and against any claims or lawsuits, including attorney's fees, that arise or result from your distribution of any product.

E. Intel(R) Integrated Performance Primitives (Intel IPP). The following terms and conditions apply only to the Intel IPP.

i. Notwithstanding anything in this Agreement to the contrary, if you implement the Sample Sources in your application or if you use Intel IPP to implement algorithms that are protected by others' licenses then you may

need additional licenses from various entities. Should any such additional licenses be required, you are solely responsible for obtaining any such licenses and agree to obtain any such licenses at your own expense.

ii. Notwithstanding anything herein to the contrary, a valid license to Intel IPP is a prerequisite to any license for Sample Source, and possession of Sample Source does not grant any license to Intel IPP (or any portion thereof). To access Sample Source, you must first register your licensed copy of the Intel IPP with Intel. By downloading, installing or copying any Sample Source file, you agree to be bound by terms of this Agreement.

F. SOFTWARE TRANSFER: Except for Pre-Release Licenses or Evaluation Licenses or Non-Commercial Licenses, as specified above, you may permanently transfer the Materials you received pursuant to a license type listed in Section 3(C) above, and all of your rights under this Agreement, to another party (“Recipient”) solely in conjunction with a change of ownership, merger, acquisition, sale or transfer of all, substantially all or any part of your business or assets or otherwise, either voluntarily, by operation of law of otherwise subject to the following: You must notify Intel of the transfer by sending a letter to Intel (i) identifying the legal entities of Recipient and you, (ii) identifying the Materials (i.e., the specific Intel software products) and the associated serial numbers to be transferred, (iii) certifying that you retain no copies of the Materials, (iv) certifying that the Recipient has agreed in writing to be bound by all of the terms and conditions of this Agreement, (v) certifying that the Recipient has been notified that in order to receive support from Intel for the Materials they must notify Intel in writing of the transfer and provide Intel with the information specified in subsection (ii) above along with the name and email address of the individual assigned to use the Materials, and (vi) providing your email address so that we may confirm receipt of your letter. Please send such letter to:

Intel Corporation

2111 NE 25th Avenue

Hillsboro, OR 97124

Attn: DPD Contracts Management, JF1-15

4. COPYRIGHT: Title to the Materials, modifications thereto provided by Intel and all copies thereof remain with Intel or its suppliers. The Materials are protected by intellectual property rights, including without limitation, United States copyright laws and international treaty provisions. You will not remove any copyright or other proprietary notice from the Materials. You agree to prevent any unauthorized copying of the Materials. Except as expressly provided herein, no license or right is granted to you directly or by implication, inducement, estoppel or otherwise; specifically Intel does not grant any express or implied right to you under Intel patents, copyrights, trademarks, or trade secrets.

5. NO WARRANTY, NO SUPPORT AND LIMITED REPLACEMENT: THE MATERIALS AND INFORMATION ARE PROVIDED "AS IS" WITH NO WARRANTIES, EXPRESS OR IMPLIED. INTEL SPECIFICALLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION, OR SAMPLE. If the media on which the Materials are furnished are found to be defective in material or workmanship under normal use for a period of ninety (90) days from the date of receipt, Intel's entire liability and your exclusive remedy shall be the replacement of the media. This offer is void if the media defect results from accident, abuse, or misapplication.

Intel may make changes to the Materials, or to items referenced therein, at any time without notice, but is not obligated to support, update or provide training for the Materials. Intel may in its sole discretion offer such support, update or training services under separate terms at Intel’s then-current rates. You may request additional information on Intel’s service offerings from an Intel sales representative.

6. LIMITATION OF LIABILITY: NEITHER INTEL NOR ITS SUPPLIERS SHALL BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR OTHER LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE, EVEN IF INTEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME JURISDICTIONS PROHIBIT THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

7. UNAUTHORIZED USE: THE MATERIALS ARE NOT DESIGNED, INTENDED, OR AUTHORIZED FOR USE IN ANY TYPE OF SYSTEM OR APPLICATION IN WHICH THE FAILURE OF THE MATERIALS COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR (e.g., MEDICAL SYSTEMS, LIFE SUSTAINING OR LIFE SAVING SYSTEMS). Should you use the Materials for any such unintended or unauthorized use, you hereby indemnify, defend, and hold Intel and its officers, subsidiaries and affiliates harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, such use and any claim of product liability,

personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Intel was negligent regarding the design or manufacture of the Materials.

8. USER SUBMISSIONS: This Agreement does not obligate you to provide Intel with materials, information, comments, suggestions or other communication regarding the Materials. However, you agree that any material, information, comments, suggestions or other communication you transmit or post to an Intel website (including but not limited to, submissions to the Intel Premier Support and/or other customer support websites or online portals) or provide to Intel under this Agreement related to the features, functions, performance or use of the Materials are deemed non-confidential and non-proprietary ("Communications"). Intel will have no obligations with respect to the Communications. You hereby grant to Intel a non-exclusive, perpetual, irrevocable, royalty-free, copyright license to copy, modify, create derivative works, publicly display, disclose, distribute, license and sublicense through multiple tiers of distribution and licensees, incorporate and otherwise use the Communications and all data, images, sounds, text, and other things embodied therein, including derivative works thereto, for any and all commercial or non-commercial purposes. You are prohibited from posting or transmitting to or from an Intel website or provide to Intel any unlawful, threatening, libelous, defamatory, obscene, pornographic, or other material that would violate any law. If you wish to provide Intel with information that you intend to be treated as confidential information, Intel requires that such confidential information

be provided pursuant to a non-disclosure agreement (“NDA”), so please contact your Intel representative to ensure the proper NDA is in place.

Nothing in this Agreement will be construed as preventing Intel from reviewing your Communications and errors or defects in Intel products discovered while reviewing your Communications. Furthermore, nothing in this Agreement will be construed as preventing Intel from implementing independently-developed enhancements to Intel’s own error diagnosis methodology to detect errors or defects in Intel products discovered while reviewing your Communications or to implement bug fixes or enhancements in Intel products. The foregoing may include the right to include your Communications in regression test suites.

9. CONSENT. You agree that Intel, its subsidiaries or suppliers may collect and use technical and related information, including but not limited to technical information about your computer, system and application software, and peripherals, that is gathered periodically to facilitate the provision of software updates, product support and other services to you (if any) related to the Materials, and to verify compliance with the terms of this Agreement. Intel may use this information, as long as it is in a form that does not personally identify you, to improve our products or to develop and provide services or technologies to you.

10. TERMINATION OF THIS LICENSE: This Agreement becomes effective on the date you accept this Agreement and will continue until terminated as provided for in this Agreement. If you are using the Materials under the control of a time-limited license, for example an Evaluation License, this Agreement terminates without notice on the last day of the time period, which is specified in the Materials, and/or controlled by the license key code for the Materials. Intel may terminate this license immediately if you are in breach of any of its terms and conditions and such breach is not cured within thirty (30) days of written notice from Intel. Upon termination, you will immediately return to Intel or destroy the Materials and all copies thereof. In the event of termination of this Agreement, the license grant to any Redistributables distributed by you in accordance with the terms and conditions of this Agreement, prior to the effective date of such termination, shall survive any such termination of this Agreement

11. U.S. GOVERNMENT RESTRICTED RIGHTS: The technical data and computer software covered by this license is a “Commercial Item,” as such term is defined by the FAR 2.101 (48 C.F.R. 2.101) and is “commercial computer software” and “commercial computer software documentation” as specified under FAR 12.212 (48 C.F.R. 12.212) or DFARS 227.7202 (48 C.F.R. 227.7202), as applicable. This commercial computer software and related documentation is provided to end users for use by and on behalf of the U.S. Government, with only those rights as are granted to all other end users pursuant to the terms and conditions herein. Use for or on behalf of the U.S. Government is permitted only if the party acquiring or using this software is properly authorized by an appropriate U.S. Government official. This use by or for the U.S. Government clause is in lieu of, and supersedes, any other FAR, DFARS, or other provision that addresses Government rights in the computer software or documentation covered by this license. All copyright licenses granted to the U.S. Government are coextensive with the technical data and computer software licenses granted herein. The U.S. Government shall only have the right to reproduce, distribute, perform, display, and prepare derivative works as needed to implement those rights.

12. GENERAL PROVISIONS

A. ENTIRE AGREEMENT: This Agreement is intended to be the entire agreement between you and Intel with respect to matters contained herein, and supersedes all prior or contemporaneous agreements and negotiations

with respect to those matters. No waiver of any breach or default shall constitute a waiver of any subsequent breach or default. If any provision of this Agreement is determined by a court to be unenforceable, you and Intel will deem the provision to be modified to the extent necessary to allow it to be enforced to the extent permitted by law, or if it cannot be modified, the provision will be severed and deleted from this Agreement, and the remainder of the Agreement will continue in effect. Any change, modification or waiver to this Agreement must be in writing and signed by an authorized representative of you and an officer (or delegate) of Intel, and must specifically identify this Agreement by its title (e.g., “End User License Agreement for the Intel(R) Software Development Products”) and version, i.e., May 2012).

B. APPLICABLE LAWS: Any claim arising under or relating to this Agreement shall be governed by the internal substantive laws of the State of Delaware, without regard to principles of conflict of laws. You agree that the terms of the United Nations Convention on Contracts for the Sale of Goods do not apply to this Agreement. You agree that your distribution and export/re-export of the Software and permitted modifications shall be in compliance with the laws, regulations, orders or other restrictions of applicable export laws.

13. THIRD PARTY PROGRAMS. The Materials may include third party programs or materials that are governed by the third party’s license terms, including without limitation, open source software. The license terms associated with such third party programs or materials govern your use of same, and Intel is not liable for such third party programs or materials.

* Other names and brands may be claimed as the property of others

# LGPL (GNU Lesser General Public License) 2.1

License Text

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink

them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete

corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of

that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

# GPL (GNU General Public License) 2.0

License Text

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND

FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.

This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program

`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

# MIT Json.NET N/A

License Text

The MIT License (MIT)

Copyright (c) 2007 James Newton-King

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

# BSD-style license N/A

License Text

Copyright (c) 2002-2010 Atsuhiko Yamanaka, JCraft,Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

# Code Project Open License (CPOL)

License Text

Preamble

This License governs Your use of the Work. This License is intended to allow developers to use the Source Code and Executable Files provided as part of the Work in any application in any form.

The main points subject to the terms of the License are:

Source Code and Executable Files can be used in commercial applications;
Source Code and Executable Files can be redistributed; and
Source Code can be modified to create derivative works.

No claim of suitability, guarantee, or any warranty whatsoever is provided. The software is provided "as-is".

The Article accompanying the Work may not be distributed or republished without the Author's consent

This License is entered between You, the individual or other entity reading or otherwise making use of the Work licensed pursuant to this License and the individual or other entity which offers the Work under the terms of this License ("Author").

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CODE PROJECT OPEN LICENSE ("LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HEREIN, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE AUTHOR GRANTS YOU THE RIGHTS CONTAINED HEREIN IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO ACCEPT AND BE BOUND BY THE TERMS OF THIS LICENSE, YOU CANNOT MAKE ANY USE OF THE WORK.

Definitions.

"Articles" means, collectively, all articles written by Author which describes how the Source Code and Executable Files for the Work may be used by a user.

"Author" means the individual or entity that offers the Work under the terms of this License.

"Derivative Work" means a work based upon the Work or upon the Work and other pre-existing works.

"Executable Files" refer to the executables, binary files, configuration and any required data files included in the Work.

"Publisher" means the provider of the website, magazine, CD-ROM, DVD or other medium from or by which the Work is obtained by You.

"Source Code" refers to the collection of source code and configuration files used to create the Executable Files.

"Standard Version" refers to such a Work if it has not been modified, or has been modified in accordance with the consent of the Author, such consent being in the full discretion of the Author.

"Work" refers to the collection of files distributed by the Publisher, including the Source Code, Executable Files, binaries, data files, documentation, whitepapers and the Articles.

"You" is you, an individual or entity wishing to use the Work and exercise your rights under this License.

Fair Use/Fair Use Rights. Nothing in this License is intended to reduce, limit, or restrict any rights arising from fair use, fair dealing, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

License Grant. Subject to the terms and conditions of this License, the Author hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

You may use the standard version of the Source Code or Executable Files in Your own applications.

You may apply bug fixes, portability fixes and other modifications obtained from the Public Domain or from the Author. A Work modified in such a way shall still be considered the standard version and will be subject to this License.

You may otherwise modify Your copy of this Work (excluding the Articles) in any way to create a Derivative Work, provided that You insert a prominent notice in each changed file stating how, when and where You changed that file.

You may distribute the standard version of the Executable Files and Source Code or Derivative Work in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution.

The Articles discussing the Work published in any form by the author may not be distributed or republished without the Author's consent. The author retains copyright to any such Articles. You may use the Executable

Files and Source Code pursuant to this License but you may not repost or republish or otherwise distribute or make available the Articles, without the prior written consent of the Author.

Any subroutines or modules supplied by You and linked into the Source Code or Executable Files this Work shall not be considered part of this Work and will not be subject to the terms of this License.

Patent License. Subject to the terms and conditions of this License, each Author hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, import, and otherwise transfer the Work.

Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

You agree not to remove any of the original copyright, patent, trademark, and attribution notices and associated disclaimers that may appear in the Source Code or Executable Files.

You agree not to advertise or in any way imply that this Work is a product of Your own.

The name of the Author may not be used to endorse or promote products derived from the Work without the prior written consent of the Author.

You agree not to sell, lease, or rent any part of the Work. This does not restrict you from including the Work or any part of the Work inside a larger software distribution that itself is being sold. The Work by itself, though, cannot be sold, leased or rented.

You may distribute the Executable Files and Source Code only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy of the Executable Files or Source Code You distribute and ensure that anyone receiving such Executable Files and Source Code agrees that the terms of this License apply to such Executable Files and/or Source Code. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute the Executable Files or Source Code with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License.

You agree not to use the Work for illegal, immoral or improper purposes, or on pages containing illegal, immoral or improper material. The Work is subject to applicable export laws. You agree to comply with all such laws and regulations that may apply to the Work after Your receipt of the Work.

Representations, Warranties and Disclaimer. THIS WORK IS PROVIDED "AS IS", "WHERE IS" AND "AS AVAILABLE", WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS OR GUARANTEES. YOU, THE USER, ASSUME ALL RISK IN ITS USE, INCLUDING COPYRIGHT INFRINGEMENT, PATENT INFRINGEMENT, SUITABILITY, ETC. AUTHOR EXPRESSLY DISCLAIMS ALL EXPRESS, IMPLIED OR STATUTORY WARRANTIES OR CONDITIONS, INCLUDING WITHOUT LIMITATION, WARRANTIES OR CONDITIONS OF MERCHANTABILITY, MERCHANTABLE QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF TITLE OR NON-INFRINGEMENT, OR THAT THE WORK (OR ANY PORTION THEREOF) IS CORRECT, USEFUL, BUG-FREE OR FREE OF VIRUSES. YOU MUST PASS THIS DISCLAIMER ON WHENEVER YOU DISTRIBUTE THE WORK OR DERIVATIVE WORKS.

Indemnity. You agree to defend, indemnify and hold harmless the Author and the Publisher from and against any claims, suits, losses, damages, liabilities, costs, and expenses (including reasonable legal or attorneys’ fees) resulting from or relating to any use of the Work by You.

Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL THE AUTHOR OR THE PUBLISHER BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK OR OTHERWISE, EVEN IF THE AUTHOR OR THE PUBLISHER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Termination.

This License and the rights granted hereunder will terminate automatically upon any breach by You of any term of this License. Individuals or entities who have received Derivative Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 6, 7, 8, 9, 10 and 11 will survive any termination of this License.

If You bring a copyright, trademark, patent or any other infringement claim against any contributor over infringements You claim are made by the Work, your License from such contributor to the Work ends automatically.

Subject to the above terms and conditions, this License is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, the Author reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

Publisher. The parties hereby confirm that the Publisher shall not, under any circumstances, be responsible for and shall not have any liability in respect of the subject matter of this License. The Publisher makes no warranty whatsoever in connection with the Work and shall not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. The Publisher reserves the right to cease making the Work available to You at any time without notice

Miscellaneous

This License shall be governed by the laws of the location of the head office of the Author or if the Author is an individual, the laws of location of the principal place of residence of the Author.

If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this License, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

This License constitutes the entire agreement between the parties with respect to the Work licensed herein. There are no understandings, agreements or representations with respect to the Work not specified herein. The Author shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Author and You.

**© 2014 Dell Inc.**
**ALLE RECHTE VORBEHALTEN.**

Dieses Handbuch enthält urheberrechtlich geschützte Informationen. Die im vorliegenden Handbuch beschriebene Software unterliegt den Bedingungen der jeweiligen Softwarelizenz oder Geheimhaltungsvereinbarung. Die Software darf nur gemäß den Bedingungen der Vereinbarung benutzt oder kopiert werden. Ohne ausdrückliche schriftliche Erlaubnis von Dell Inc. darf diese Anleitung weder ganz noch teilweise zu einem anderen Zweck als dem persönlichen Gebrauch des Käufers vervielfältigt oder übertragen werden, unabhängig davon, auf welche Weise oder mit welchen Mitteln, elektronisch oder mechanisch, durch Fotokopieren oder Aufzeichnen, dies geschieht.

Die Informationen in diesem Dokument werden in Verbindung mit Dell-Produkten zur Verfügung gestellt. Durch dieses Dokument wird weder explizit noch implizit, durch Duldungsvollmacht oder auf andere Weise, eine Lizenz auf intellektuelle Eigentumsrechte erteilt, auch nicht in Verbindung mit dem Erwerb von Dell-Produkten. IN DEN ALLGEMEINEN GESCHÄFTSBEDINGUNGEN, DIE IN DER LIZENZVEREINBARUNG FÜR DIESES PRODUKT AUFGEFÜHRT SIND, ÜBERNIMMT DELL KEINERLEI HAFTUNG UND SCHLIESST JEDE EXPLIZITE, IMPLIZITE ODER GESETZLICHE GEWÄHRLEISTUNG FÜR SEINE PRODUKTE AUS, INSBESONDERE DIE IMPLIZITE GEWÄHRLEISTUNG DER MARKTFÄHIGKEIT, DER EIGNUNG ZU EINEM BESTIMMTEN ZWECK UND DIE GEWÄHRLEISTUNG DER NICHTVERLETZUNG VON RECHTEN. UNTER KEINEN UMSTÄNDEN HAFTET DELL FÜR UNMITTELBARE, MITTELBARE ODER FOLGESCHÄDEN, SCHADENERSATZ, BESONDERE ODER KONKRETE SCHÄDEN (INSBESONDERE SCHÄDEN, DIE AUS ENTGANGENEN GEWINNEN, GESCHÄFTSUNTERBRECHUNGEN ODER DATENVERLUSTEN ENTSTEHEN), DIE SICH DURCH DIE NUTZUNG ODER UNMÖGLICHKEIT DER NUTZUNG DIESES DOKUMENTS ERGEBEN, AUCH WENN DELL ÜBER DIE MÖGLICHKEIT SOLCHER SCHÄDEN INFORMIERT WURDE. Dell übernimmt keine Garantie für die Richtigkeit oder Vollständigkeit der Inhalte dieses Dokuments und behält sich vor, jederzeit und ohne vorherige Ankündigung Änderungen an den Spezifikationen und Produktbeschreibungen vorzunehmen. Dell geht keinerlei Verpflichtung ein, die in diesem Dokument enthaltenen Informationen zu aktualisieren.

Bei Fragen zur möglichen Verwendung dieser Materialien wenden Sie sich an:

Dell Inc.
Attn: LEGAL Dept
5 Polaris Way
Aliso Viejo, CA 92656

Informationen zu regionalen und internationalen Niederlassungen finden Sie auf unserer Website (software.dell.com).

**Marken**

Dell, das Dell-Logo und AppAssure sind Marken von Dell Inc.. Andere in diesem Dokument verwendete Marken und Handelsnamen beziehen sich auf die Unternehmen, die Rechteinhaber der Marken und Handelsnamen sind, oder auf deren Produkte. Dell beansprucht keinerlei Eigentumsrechte an Marken und Markennamen außer den eigenen Marken und Markennamen.

## Legende

△ **VORSICHT: Das Symbol VORSICHT weist auf eine mögliche Beschädigung von Hardware oder den möglichen Verlust von Daten hin, wenn die Anweisungen nicht befolgt werden.**

⚠ **WARNUNG: Das Symbol WARNUNG weist auf mögliche Personen- oder Sachschäden oder Schäden mit Todesfolge hin.**

ⓘ **WICHTIG**, **HINWEIS**, **TIPP**, **MOBIL** oder **VIDEO:** Ein Informationssymbol weist auf Begleitinformationen hin.

AppAssure Releaseinformationen
Aktualisiert: Februar 2015
Softwareversion: 5.4.3